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As a library, NLM provides access to scientific literature. Inclusion in an NLM database does not imply endorsement of, or agreement with, the contents by NLM or the National Institutes of Health. Learn more: PMC Disclaimer | PMC Copyright Notice J Public Health Manag Pract. Author manuscript; available in PMC: 2012 Aug 30. There is considerable scientific and policy interest in reducing socioeconomic and racial/ethnic disparities in healthcare and health status. Currently, much of the policy focus around reducing health disparities has been geared towards improving access, coverage, quality and the intensity of healthcare. However, health is more a function of lifestyles linked to living and working conditions than of healthcare. Accordingly, effective efforts to improve health and reduce gaps in health need to pay greater attention to addressing the social determinants of health within and outside of the healthcare system. This paper highlights research evidence documenting that tackling the social determinants of health can lead to reductions in health disparities. It focuses both on interventions within the healthcare system that address some of the social determinants of health, as well as, interventions in upstream factors such as housing, neighborhood conditions and increased socioeconomic status that can lead to improvements in health. The studies reviewed highlight the importance of systematic evaluation of social and economic policies that might have health consequences and the need for policy makers, healthcare providers, and leaders across multiple sectors of society to apply currently available knowledge to improve the underlying conditions that impact the health of populations.Keywords: racial disparities, socioeconomic disparities, interventions, healthcareIn the past decade there has been increased awareness of large racial and ethnic disparities in medical care and many new initiatives to address them. In spite of all these efforts, several recent studies indicate the persistence of large disparities in treatment by race and ethnicity.1 Even more important than these healthcare disparities is the striking evidence of the persistence of disparities in health status by both socioeconomic status2 and race/ethnicity.3 Despite a broad range of societal efforts to improve the health practices and quality of life of socio-economically disadvantaged populations, very little progress has been made in reducing social gaps in health. Moreover, there is growing evidence that these disparities are costly to society in multiple ways. For example, a recent economic analysis revealed that if all adult Americans experienced the level of illness and mortality of college graduates, the annual economic benefit would amount to at least one trillion dollars.4 These substantial costs highlight the urgency of renewed efforts to find effective strategies to improve health and reduce social disparities.Currently, much of the policy focus around reducing social disparities in health status have been on initiatives seeking to improve access and coverage as well as the quality and intensity of healthcare. In contrast, the available evidence suggests that as important as medical care is, it is a relatively small contributor to the overall health status of the population.5 Most health problems occur long before people get to their healthcare provider or hospital. However, given the nature of disparities, interventions are needed both within and outside the healthcare system. Social disparities in health exist for the onset of illness, as well as, for the severity and progression of disease. They are generally larger for the latter and the interventions necessary to delay the progression of disease are those that occur within the healthcare system.6 In contrast, interventions outside the healthcare system are likely to have a larger effect on reducing the incidence of illness. Accordingly, effective efforts to improve health and reduce gaps in health need to pay greater attention to addressing the non-medical determinants of health.7 Inadequate attention has been given to evaluating the health consequences of social interventions and this paper does not attempt to provide a systematic review of the available evidence. Its purpose is to selectively highlight the research evidence that documents that tackling the social determinants of health can lead to improvements in health and reductions in social disparities in disease. Emphasis is given to the available evidence from randomized control trials, and from other studies that have used rigorous evaluation methodologies. We will focus both on interventions within the healthcare system that seek to address at least some of the social determinants of health and on interventions in upstream factors such as housing, neighborhood conditions, and improved socioeconomic status that can lead to improvements in health.In Europe, Dr. Julian Tudor Hart has pioneered the anticipatory care model which reflected his belief that in order for individuals to change their behavior, they need incentives beyond brief visits with a physician and health education pamphlets.8 Key aspects of anticipatory care are increased engagement with patients as co-producers of health, proactive practice-based case-finding and follow-up, an emphasis on the delivery of medical services to the entire population of his practice area, and attention to a long-term relationship between the patient and the provider. Dr. Hart increased the length of time spent with patients, engaged in intense follow-up and expanded the staff of his practice so that he could provide the needed comprehensive care. Long-term follow-up of 1,800 patients registered with his practice in Glyncorrwg, South Wales revealed that this intensive approach to care had an impact on the small coal mining community. This proactive approach to medical care has been effective in reducing blood pressure levels among hypertensive patients, smoking rates among men and mortality rates in Glyncorrwg compared to a similar neighboring community.911U.S. research also indicates that proactive, intensive and comprehensive care can improve the health of vulnerable groups. The Nurse-Family Partnership Program (NFP) is an example of a healthcare intervention program that takes a broader view of addressing the needs health and social of the individual and family.12 Since 1977, there have been three randomized control trials: Elmira, NY (400 low income, primarily white families), Memphis, TN (1138 low-income, primarily African American families) and Denver, CO (735 predominantly Hispanic families) that have documented the effectiveness of this program in improving health outcomes.13 In all trials, NFP focused on low income, adolescent or unmarried pregnant women with no previous live birth. Women in the intervention group received home visits by nurses during their pregnancy and the first two years of their childrens lives. The home visits focused on improving the prenatal health-related behaviors of women, including reducing their use of cigarettes, alcohol and illegal drugs and enabling them to obtain the needed treatment for pregnancy-related complications. Nurses visits continue after childbirth and focus on improving childrens postnatal health by assisting parents in providing responsible and competent care for children in their early years of life. The broad focus of the program includes seeking to enhance parents economic self-sufficiency by fostering or encouraging a vision for their future, planning subsequent pregnancies and enhancing educational and employment opportunities.13 The nurse home visitor involved other family members, including fathers, grandmothers and concerned relatives, so that the necessary links could be established between the family and the needed health and human services. The control group in these trials received conventional prenatal and postnatal healthcare services and transportation vouchers to get to their medical care site.13Rigorous research evaluation of the NFP reveals that it led to improvements in prenatal health-related behaviors, pregnancy outcomes (such as reduced preterm delivery and lower rates of pregnancy-induced hypertension), reduced rates of child abuse and neglect, reduced rates of subsequent pregnancies, and increased maternal employment.12 Other documented benefits of the NFP include longer intervals between the birth of first and second children, longer relationships with current partner and fewer months of using Welfare and food stamps.12 The positive effects of the program were also greater among families where the mother was considered at high risk (low income, unmarried, or a teenager). Cost-benefit analysis of the NFP reveals that there is a $17,000 return to society for each family served by the program.13 These benefits were calculated based on the programs impact on societal outcomes such as crime, substance abuse, teen pregnancy, child abuse and neglect, and domestic violence.The Infant Health and Development Program (IHDP) is another randomized trial that shows promise for improving infant outcomes.14 The investigators conducted an 8-site randomized control trial with 985 low birth weight newborns assigned to IHDP or a control condition. The program provided pediatric follow-up care to both the intervention and control groups. In addition, the intervention group received home visits, educationally enriched daycare for children from birth through age three, and group meetings for parents. Trained child development specialists made home visits during the childs first year and encouraged parental involvement in interactive games with their children. During the second and third years of service families were provided with center-based childcare and monthly parent group meetings. These activities focused on increasing childrens exposure to complex cognitive tasks and language experiences. Evaluation of this program documented substantial initial intervention effects on cognition and behavior, although these effects began to attenuate by ages five through eight. Nonetheless, 18 years after birth, higher birth-weight children in the intervention group had better language development and math achievement and fewer risky behaviors than the control group.Healthy Steps for Young Children is a program that included home visits to enhance the quality of care and parenting practices.15 It was evaluated at six randomization and nine quasi-experimental sites. Outcomes included experiences seeking care, parent response to child misbehavior, perception of childs behavior, and parenting practices to promote development and safety. Intervention families received standard care as well as enhanced well-child care, up to six home visits in the first three years, a phone line for non-emergency concerns, developmental assessments, written materials, parenting groups, and community resources. Evaluation of this program revealed that there was enhanced quality of care, parenting practices, discipline and healthcare seeking among parents in the intervention group. Importantly, the intervention reduced income disparities in the use of preventive services. Evaluation at five to five and a half years of age revealed that children in the intervention group had higher overall levels of health and their parents had more favorable practices of reading to their children, using appropriate car-seat restraints, and seeking healthcare for their children than control families. On the other hand, there were no differences in emergency department use or in hospitalization rates. This model integrates new healthcare professionals into pediatric care and it now operates in 18 states.A home visiting program has also led to improvements in the management of childhood asthma in a multi-ethnic predominantly low SES sample in rural areas.16 This project used a quasi-experimental design with treatment and control groups randomized at the level of the school. In the treatment group, 58 children in four rural school districts received in-school small group asthma education and their parents received a home-based education visit. During the in-home visits, each parent received an asthma-education booklet written at the fifth grade level. Research team members also addressed parental concerns, answered questions and identified asthma triggers during the home visits. Evaluation of the project demonstrated improved asthma management between baseline and 12 months. Importantly, children from poorer families had the greatest sustained gains in asthma management.Another model of home visitation comes from a Chicago program seeking to improve infants outcomes by using community under the supervision of nurses.17 A double-blind evaluation found that the community worker-nurse team was as effective as a community nurse in identifying and referring infant problems during a home visit. In this model, each team comprised of one nurse and two health advocates followed a caseload of 150 families, contacting each family at least once a month. The community advocates conduct the first visit in the home within the first two weeks after discharge. At each visit, the advocate ascertained and responded to the mothers concerns and problems and addressed upcoming developmental changes, appropriate parenting and positive discipline strategies. The advocate also assessed home safety and reviewed infant health status growth and nutrition, signs of illness and appropriate responses, and preventive care received and needed. The nurse accompanies an advocate at one, six and 12 months and conducts an infant health and development screening. The advocate also assisted the mother in scheduling a visit when preventive or acute care was needed. Importantly, the home visits did not replace regular well child visits. After two months, if a mother and infant are doing well and have a working telephone, a telephone conversation can be substituted for alternative monthly visits. The Chicago program found stronger effects for African-American than for Mexican-American mothers. At one-year follow-up there was a significant increase in positive attitudes, higher infant mental development scores, and mothers in the intervention group were able to document that their shots were up to date.The model of early childhood home visits works in other countries. An example is the New Zealand Early Start Program.18, 19 This program used a randomized, controlled trial design in which 220 families with risk factors for poor family functioning were compared with a control group of 223 similar families. In this program family support workers who were social workers or nurses provided services to families in their homes. The goals of the program were to improve child health, reduce child abuse, enhance parenting skills, support physical and mental health, encourage family economic and material well-being, and encourage stable, positive partnerships. Evaluation of this program revealed that by 3 years of age, children in the program had a larger number of visits to their healthcare provider, were more likely to be up to date with their well-child checks, and were less likely to have visited the hospital for injuries and to be enrolled in the receipt of dental care. Intervention children also had longer enrollment in early childhood education and their families had had more community service contacts. Parents in the intervention reported better parenting attitudes and skills, as well as, fewer behaviors that reflect severe physical assault. At the same time, there were no differences between the intervention and control group with respect to the rates with which the groups had contact with the agency responsible for following up on cases of child maltreatment.The Medical-Legal Partnership (MLP) model developed by the Boston Medical Center 20 has not been rigorously evaluated but shows promise for improving care and enhancing the management of disease. This model has integrated on-site lawyers into the network of specialists used for primary care provider referrals in a pediatric practice. This intervention is premised on the idea that a high proportion of low and moderate income families face serious legal challenges that are often not perceived as legal issues, but that adversely affect the quality of life of their children and the management of chronic illness. The addition of lawyers to the medical team can promote health, prevent disease and address barriers to the effective care and management of illness by screening patients and their families for social problems that can affect their medical care, assisting in the resolution of specific social problems and enhancing the effectiveness of advocacy by the entire healthcare team. The attorneys work to ensure that patients obtain all the needed services that they are entitled to receive. The MLP has enhanced the ability of the healthcare team to address patients stressors in the areas of housing, immigration, income support, health insurance, education access, disability and family law both by thwarting the illegal denial of various benefits to families as well as by navigating the complex bureaucratic regulations that have shifted in recent years from an emphasis on health and families to one of preventing fraud.A U.S. Task Force has concluded that access to societal resources such as the standard of living, social institutions, political and economic structures, and the built environment are the key determinants of health.21 The socially embedded conditions that affect health were grouped into six key areas: 1) neighborhood living conditions; 2) opportunities for learning and capacity for development; 3) employment opportunities and community development; 4) prevailing norms, customs and processes; 5) social cohesion, civic engagement and collective efficacy; and 6) health promotion, disease prevention and healthcare opportunities. Within these 6 domains, the Task Force identified over 200 specific community-based interventions that could play a role in improving the social environment and health, and in reducing socioeconomic and racial/ethnic disparities but then acknowledged that very few of these strategies had been evaluated.21 It concluded that ample evidence documenting effectiveness existed for only two interventions: early childhood development programs for low-income children and rental assistance programs for low SES families. 21 We now consider select evidence that indicates that improvements in social conditions can affect health.While there are few natural experiments or quasi-experimental longitudinal studies that address how improving neighborhood conditions can affect health behavior and outcomes, a recent review concluded that the Moving to Opportunity (MTO) and Yonkers interventions provide the strongest evidence on the health benefits of housing mobility policies.22 The Moving To Opportunity Program was a fair housing demonstration in which low-income, predominantly minority residents were randomly selected from families in high poverty neighborhoods to move to less poor neighborhoods. This program used a randomized experimental approach and was implemented in five cities, including Baltimore, Boston, Chicago, Los Angeles and New York. Evaluation of the New York MTO group revealed that compared to the comparison group, the mental health of both parents and sons had improved three years after the move.23 Moving to Opportunity participants also reported lower levels of violent crime victimization.22Yonkers, NY had a citywide de-concentration of public housing in which half of the families residing in public housing in Yonkers and half of those families who were part of public housing waiting lists and met eligibility requirements were selected via a lottery process to move to newly built public housing sites. Two years after the families had moved, researchers found that those that had moved to better housing conditions reported better overall health, including less substance abuse, less neighborhood disorder, less violence exposure and other health problems compared to those who had stayed in their original neighborhoods.24 Movers also reported better satisfaction with public transportation, recreation facilities and medical care. In addition, they had higher rates of employment and lower rates of welfare receipt.Finally, the Gautreaux Residential Mobility Program in Chicago was designed to desegregate public housing from its concentration in high poverty and often largely minority neighborhoods. In this program black families who lived in or were on waiting lists for public housing were given a housing voucher that enabled them to move into low poverty neighborhoods. Long term evaluation of the Gautreaux Program found that movers reported better neighborhood resources with almost none of them returning to their original neighborhood.Limited evidence from other countries also suggests that improvements in the infrastructure of communities can also lead to improvements in the health of residents. For example, a ten-year follow-up study in Norway found that residents in a poorly functioning neighborhood that had experienced marked change in the improvement of their residential environment reported better mental health a decade later.25 This improved mental health was not explained by selective migration into the neighborhood. The neighborhood improvements had included a new public school and playground, the establishment of a sports arena and park, the initiation of activities for adolescents, the development of a shopping center with restaurants and a cinema and a subway line extension into the neighborhood.Similar mental health effects were observed in a poorly functioning English neighborhood.26 In this study, housing had been refurbished, with an emphasis on making it safe and sheltered from strangers. Other neighborhood changes included improved traffic regulations, general landscaping and lighting, strengthening of windows, the enclosure of gardens for apartments and the closure of alleyways. In this project, neighbors had been involved in the planning process from the beginning. A one-year follow-up study documented that the changes in the neighborhood environment were associated with changes in mental health and social cohesion. Residents reported increased contact with their neighbors and higher levels of trust in their neighbors. In addition, levels of optimism and belief in the future had increased and residents also reported stronger identification with their neighborhood. Levels of anxiety and depression had also been significantly reduced among the residents.Policies that provide additional income can also be effective in improving health. A recent natural experiment, the Great Smoky Mountain Study, assessed the impact of an income supplement on levels of mental health for American Indian children.27 It enrolled 9 to 13 year old children in North Carolina that included an over-sample of American Indians. Beginning in 1996, American Indian tribal members began receiving added income from a casino built on the reservation. With this new addition, every individual received a portion of the profits twice a year. The childrens payments were to be kept in a trust fund until they were 18 years old. By 2001, the added income had increased to a payment of $6000 for that year. In addition to the supplemental income, American Indians were offered preferential employment for the jobs in the casino, motels and restaurants in the surrounding areas. The study found that children in families that received the supplemental income due to the opening of the casino had declining rates of deviant and aggressive behavior. By the fourth year of the program their level of psychiatric symptoms was comparable to those of children who were never poor. The researchers found that level of parental supervision mediated the affect of alleviating poverty.Evidence of the potential health impact of additional income also comes from the negative income tax experiments which gave additional income to individuals who met program criteria. In this program, individuals were guaranteed a minimum income with a tax reduction at a designated rate associated with each dollar of additional income earned. An assessment of the effect of income transfers on the health of low-income families at the Gary, Indiana site of the income maintenance experiment found that supplemental income to mothers was associated with higher birth weights for their children in the absence of any health intervention.28 The magnitude of the effect of the added birth weight for infants was greater than that of the difference seen in birth weights between smokers and non-smokers and between black and white mothers. The researchers postulated that the underlying causal mechanism was improved nutrition.A recent study documented that additional income from the Supplemental Security Income (SSI) Program reduced disability in the elderly.29 In this study, disability was assessed using the 1990 and 2000 Censuses disability measure that asked respondents if they had any health condition, lasting six or more months that made it difficult or impossible to go outside the house alone. This study examined within state variation and benefits from SSI over time and documented that for every $100 increase in maximum monthly SSI benefits there was a reduction in disability of 4.6 percent. Accordingly, there was an estimated 11 percent reduction in disability for a 15 to 20 percent change in income.Further evidence of the potential impact of income supplements on health comes from the New Hope Random Assignment Experiment in Milwaukee, Wisconsin.30 This experiment tested the effectiveness of an employment-based anti-poverty program that provided strong work support for persons living in poverty. This program was not tied to the welfare system but was available to all adults with low income. The work support included extensive childcare assistance and healthcare subsidies. In addition, the program tested the effects of earning supplements designed to raise the total income above the poverty threshold. Five years after the program ended, the researchers documented that the program had a positive effect on the childrens school achievement, motivation and social behavior, especially for boys across the age range 6 to 16 years. Boys performed better on school-related measures (e.g., classroom study skills) and had more positive social behaviors (e.g., sensitivity to others). They also had higher levels of school engagement, higher expectations for future educational attainment and lower levels of aggression.Conditional Cash Transfer Programs in Latin America provide further evidence of the benefits of income supplementation for health.31 The first large-scale program was Mexicos Education, Health and Nutrition Program (PROGRESA, now called Oportunidades), which was established in 1997. Under this program low-income families received cash transfers, but their receipt of the additional cash was conditional, based on their childrens enrollment and attendance in school, their compliance with regular visits to health centers for preventive care check-ups and their participation in information sessions on nutrition and hygiene. Compared to the control group, the intervention group had increased immunization rates and nutrition monitoring, decreased illness rates and reduced levels of child stunting.A source of ambiguity with regard to the Conditional Cash Transfer Program is what aspect or component of the program was actually responsible for the change. Two recent papers suggest that the additional money that was responsible for the health improvements observed. First, Paxson and Schady32 report the results of a cash transfer program in Ecuador. In this program, receipt of the cash transfer was not conditioned on any actions on the part of parents such as taking the children to health clinics or sending them to school. Random assignment at the parish level was used to identify the programs effects. The researchers found that the cash transfer program had positive effects on the physical, cognitive, and socio-emotional development of children. Moreover, the treatment effects where substantially larger for poorer children than for less poor children.A second paper examined the relationship between the amount of cash received and health outcomes in the Mexican PROGRESA Program.33 This study focused on those children who had been enrolled in the program during their entire lives. The researchers conducted a dose- response analysis instead of a treatment control analysis. They assessed the cumulative effect of conditional cash transfers by examining families with children who had received incremental benefits of the program. They documented that a doubling of the cumulative cash transfer was associated with a decrease in stunting (28.7%), decrease in BMI for age percentile, lower prevalence of being overweight, improvements in endurance, language development, short and long-term memory, and an increase in height for age. Importantly, they found that the length of time in the program was not associated with any outcome, indicating that the key determinant of the programs success was the additional money.Evidence from interventions in which preschoolers were randomized to receive enhanced academic enrichment suggests that they have enormous potential for improving health. In the Perry Preschool Program, 123 African-American three- and four-year-old children living in poverty were randomly assigned to an intervention or a control group.34 Four teachers with bachelors degrees held a daily class with the students in the intervention group and made weekly home visits. At age 40, compared to the control group, participants in the intervention had better academic performance (more likely to have graduated from high school), higher SES (higher employment, income, savings and home ownership), and lower lifetime rates of crime and welfare dependence. Moreover, there was a $17 return to society from every dollar invested in the early education. Although health was not a specific focus of the intervention, the striking effects documented on SES suggests that there are likely to be substantial ripple effects on health given the strong association between SES and health. Similar benefits are evident in other early childhood intervention programs that have a shorter follow-up. In the Abecedarian Project in North Carolina, where preschoolers in a similar intervention have been followed up through age 21, the early childhood intervention was associated with lower rates of depression.35 A non-randomized early childhood intervention in Chicago, with a 19-year follow-up, showed that in addition to higher levels of educational attainment and lower rates of crime, participants in the early childhood intervention were more likely to have health insurance and less likely to be depressed and disabled.36The Civil Rights Movement and related initiatives of the 1960s such as the War on Poverty had profound effects on the socioeconomic status of the black population in the U.S. Several studies indicate that the improvements in SES were associated with improved health status. Kaplan and colleagues37 showed that the black-white convergence in economic status that followed in the wake of the 1964 Civil Rights Act was larger for women than for men. They examined changes in life expectancy for the decade before the Civil Rights Act (195564) with those in the decade after (196574). They found that the gains in life expectancy for working-age black women during 196574 exceeded those of other race and sex groups and were three times as large as those in the prior decade. Another study documented that between 1968 and 1978, a period during which the racial gap in income declined as a result of the gains of the Civil Rights movement and anti-poverty policy, African-American males and females, 35 to 74 years of age, had a larger absolute and relative decline in overall mortality compared to their white counterparts.38Almond and Chay 39 have also documented that changes in social policies during the Civil Rights era linked to hospital desegregation, the advent of Medicaid and food stamps may have had long run and intergenerational benefits. They compared the health status and outcomes for black and white women born in 1967 to 1969 compared to those born in 1961 to 1963. They found that black women born in 1967 to 1969 had substantially lower risk factor rates as adults and were much less likely to give birth to an infant with low-birth weight and low APGAR scores than black women born during 1961 to 1963. The between cohort gains for white women were small to nonexistent. The researchers documented that the timing of the black/white relative birth cohort improvements corresponded with the timing of the 1960s infant health gains, and their analyses were robust to several tests of internal validity.A related analysis also found that civil rights and other social policies led to the reduction in the black-white gap in infant mortality in southern states between the mid 1960s to the early 1970s.40 The study documented that the mandated desegregation of Southern hospitals as a result of the 1964 Civil Rights Act enabled 5000 to 7000 additional black infants to survive infancy from 1965 to 1975 and at least 25,000 infants to survive from 1965 to 2002. Moreover, they estimate that the benefits in reduced infant mortality by themselves generated a welfare gain of more than seven billion dollars in 2005 dollars for the 1965 to 1975 period and more than 27 billion dollars for the 1965 to 2002 period. The study emphasized that the benefits of the 1960s Civil Rights legislation extended beyond the labor market and are much larger than was previously recognized. The pattern of the racial gap in health during the last half of the 20th Century appeared to be very sensitive to the racial disparities in income. As the income of blacks fell relative to that of whites during the decade of the 1980s, racial disparities in health worsened for multiple indicators.41 For example, the life expectancy for blacks declined form the 1984 level for 5 years in a row while the life expectancy of whites increased slightly during this period.The studies reviewed highlight the promise of interventions on the social determinants of health but they also indicate that there is much that we still need to learn. Simply having nurses make home visits will not lead to improved health outcomes. While there is evidence of impressive benefits for the NFP program and other programs reviewed, the evidence is mixed with some other nurse visiting programs not showing any benefit.13 The level of training that home visitors need to ensure program success is also unclear. For example, at the Denver site of the NFP, families who were assigned a paraprofessional visitor dropped out of the program at a higher rate and missed more scheduled visits than did families who were assigned a nurse visitor suggesting that recruitment and engagement strategies and the background and training of the home visitors are important to program success.13 Interventions that are effective need to be well designed and implemented and we still lack a clear understanding of all of the key ingredients of effective home visiting programs.For interventions within the healthcare system, an important challenge is to motivate providers to take personal and institutional ownership of the problem of health disparities. Some evidence suggests that although most healthcare providers are aware of disparities, they do not perceive that they exist in their own practices and they tend to believe that the important determinants are factors related to patients rather than factors linked to the provider or the healthcare system.42 Important policy priorities are to enhance provider awareness of the unrealized opportunities that they have to improve health and reduce disparities and to develop policies that provide incentives for health care providers to be more proactive in the comprehensive provision of the needed therapeutic and preventive care to patients.Another important question is how to best combine, scientifically and practically, the twin goals of improving health and reducing disparities. Most of the studies reviewed did not directly evaluate any impact on health disparities but documented an effect on improving health, especially for socially disadvantaged populations. However, initiatives that improve health will not necessarily reduce disparities. In fact, some evidence suggests that the initiatives likely to have the largest impact on improving health will widen disparities because the least disadvantaged are likely to experience the greatest improvements.43 Reducing disparities require targeted efforts to produce more rapid improvements in the health of the most disadvantaged compared to the rest of society.44 The challenge of doing this is likely to be enormous given the wariness of U.S. policy makers of supporting programs that are tailored to socially disadvantaged groups.45 At the same time, ethical and equity considerations would strongly support giving priority to improving outcomes for the most disadvantaged and for those early in life who would have a longer time to reap the benefits. Establishing priorities for targeting population groups should also be balanced with priorities for selecting health outcomes. The greatest gains to society will most likely come from strategies that focus on the most commonly occurring problems.44 Research is needed to identify how to build the needed public support and political will for interventions that are identified as optimal.We are also largely unaware of the optimal levels for the implementation of various interventions. Are some policies better implemented at the national, state, or local level? Under what conditions does the nature of funding -- public versus private or some combination of the two matter for the successful implementation of interventions? There is little available evidence to inform policy makers on these issues. Also, although the effects of SES are largest at the bottom of the SES hierarchy, SES differences exist along the entire continuum of SES.41 Improving health and reducing disparities requires attention to all levels of the spectrum of SES and we currently do not know the extent to which different strategies are needed for efforts targeted at low SES groups compared to those seeking to improve the health of the middle and upper classes.Starfield6 also suggests that non-medical interventions are likely to be differentially effective for different indicators of health. While improvements in education may have a large effect on outcomes such as health behaviors where knowledge is important, improvements in material resources are likely to have a large impact on prevention and the management of some illnesses. If empirical research supports the validity of these claims, it could facilitate the development and targeting of alternative interventions and ensure more efficient use of limited resources.The studies reviewed suggest that health does not occur in a vacuum. Instead, health status is embedded in larger living and working conditions. There is strong, suggestive evidence that viewing an individual as more than just a system of organs, and taking into account the social context in the delivery of healthcare services can have an important impact in improving health. In addition, the larger social and economic policies that impact the quality of life and the living conditions in homes and communities, as well as, the economic resources available to the household can also importantly affect health. The findings reviewed illustrate that policies in many areas far removed from healthcare services can have decisive health consequences. It is imperative that greater attention be given to the systematic evaluation of social and economic policies that might have health consequences. More importantly, the findings considered emphasize the need for policy makers, healthcare providers, and leaders from multiple sectors of society to use the currently available knowledge to improve living conditions and thus the health of populations. These approaches have the potential to improve health for all, reduce disparities in health and create more productive and rewarding lives.Preparation of this paper was supported in part by grant R01 MH 59575 from the National Institute of Mental Health (D.R.W), grant R01 HL069413, a Research Supplement to U-01 HL 87322-02 from the National Heart Lung and Blood Institute (S.A.M.) and by the John D. and Catherine T. McArthur Foundation Research Network on Socioeconomic Status and Health (D.R.W). We wish to thank Steven Beeber for assistance with preparing the manuscript.
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